

AMENDMENTS TO THE CLAIMS

Claims 1-5 (Cancelled)

Claim 6 (Withdrawn) A digital broadcast apparatus comprising:

a first multiplexing unit operable to multiplex video data and/or audio data into a transport stream;

a second multiplexing unit operable to repeatedly multiplex tables on the transport stream in a section format, the tables each including information used for extraction and output of video data and/or audio data performed by a receiving apparatus and being identified by a packet identifier and a table identifier;

a third multiplexing unit operable to repeatedly multiplex, onto the transport stream, an information table that includes (i) a piece of table ID information and a table version number of each of the tables and (ii) an information table version number of the information table, which is to be updated when any one of the tables is updated; and

a transmitting unit operable to transmit the transport stream, on which the first, second, and third multiplexing units have performed the multiplexing, to the receiving apparatus.

Claim 7 (Cancelled)

Claim 8 (Withdrawn) A digital broadcast method comprising:

a first multiplexing step of multiplexing video data and/or audio data onto a transport stream;

a second multiplexing step of repeatedly multiplexing tables on the transport stream in a section format, the tables each including information used for extraction and output of video data and/or audio data performed by a receiving apparatus and being identified by a packet identifier and a table identifier;

a third multiplexing step of repeatedly multiplexing, onto the transport stream, an

information table that includes (i) a piece of table ID information and a table version number of each of the tables and (ii) an information table version number of the information table, which is to be updated when any one of the tables is updated; and

a transmitting step of transmitting the transport stream, on which the first, second, and third multiplexing steps have performed the multiplexing, to the receiving apparatus.

Claim 9 (Cancelled)

Claim 10 (New) A digital broadcast receiving apparatus for receiving a transport stream into which a plurality of output information tables and an update information table are respectively and repeatedly multiplexed and into which video data and/or audio data are multiplexed and outputting the video data and/or the audio data,

wherein each output information table is contained in a transport stream packet in a section format and includes (i) a first version number, (ii) a unique ID including a packet identifier and a table identifier, and (iii) information for extracting and outputting the video data and/or the audio data,

wherein the update information table includes (i) a plurality of unique IDs, each of which identifies a respective output information table, (ii) a plurality of first version numbers, each of which indicates an update version of a respective output information table, and (iii) a second version number indicating a version of the update information table, and

wherein the second version number of the update information table of the transport stream is updated when a change occurs in any of the unique IDs and the first version numbers included in the update information table,

the digital broadcast receiving apparatus comprising:

a first extracting unit including corresponding packet and section filters, and operable to extract the output information tables from the transport stream according to the corresponding packet and section filters;

a storing unit operable to store the output information tables extracted by the first

extracting unit;

a second extracting unit operable to extract the update information table from the transport stream when the second version number has been updated; and

a controlling unit operable to control (i) the first extracting unit to extract an updated version of an output information table and (ii) the storing unit to update the output information tables stored therein according to the extracted updated version of the output information table, wherein the controlling unit comprises:

an information list generating subunit operable to generate an information list containing information that is included in each stored output information table and corresponds to information included in the extracted update information table;

a comparing subunit operable to (i) compare, with respect to each stored output information table, a corresponding first version number included in the information list with a corresponding first version number of the respective output information table included in the extracted update information table, and (ii) identify, based on the comparison, a stored output information table having a corresponding first version number that has been updated in the extracted update information table; and

a filter condition setting subunit operable to set the packet identifier and the table identifier, included in the unique ID of the output information table identified by the comparing subunit, as the corresponding packet and section filters, respectively, to allow the first extraction unit to extract, from the transport stream, an updated version of the output information table identified by the comparing subunit.

Claim 11 (New) The digital broadcast receiving apparatus of Claim 10, wherein the unique IDs included in the update information table are the packet identifiers and the table identifiers.

Claim 12 (New) The digital broadcast receiving apparatus of Claim 10, wherein:

extraction conditions of the corresponding packet and section filters are set by the filter condition setting subunit; and

when the first extracting unit extracts an updated version of an output information table, and the storing unit contains an older version of the output information table, the first extracting unit overwrites the older version of the output information table with the extracted updated version of the output information table.

Claim 13 (New) The digital broadcast receiving apparatus of Claim 12, wherein:

the update information table further includes a flag indicating whether or not each of the output information tables is being multiplexed into the transport stream; and

the controlling unit further includes a deletion subunit operable to delete, from (i) the storing unit, an output information table indicated by the flag as not being multiplexed into the transport stream and (ii) the generated information list, any information corresponding to the deleted output information table.

Claim 14 (New) The digital broadcast receiving apparatus of Claim 13, wherein:

the update information table further includes a respective validity period of each output information table;

the controlling unit further comprises a schedule generating subunit operable to generate a schedule for extracting an output information table at a beginning of a respective validity period and for deleting an output information table at an end of a respective validity period; and

the filter condition setting subunit and the deletion subunit operate according to the schedule.

Claim 15 (New) A digital broadcast receiving method for receiving a transport stream into which a plurality of output information tables and an update information table are respectively and repeatedly multiplexed and into which video data and/or audio data are multiplexed and outputting video data and/or audio data,

wherein each output information table is contained in a transport stream packet in a section format and includes (i) a first version number, (ii) a unique ID including a packet

identifier and a table identifier, and (iii) information for extracting and outputting the video data and/or the audio data,

wherein the update information table includes (i) a plurality of unique IDs, each of which identifies a respective output information table, (ii) a plurality of first version numbers, each of which indicates an update version of a respective output information table, and (iii) a second version number indicating a version of the update information table, and

wherein the second version number of the update information table of the transport stream is updated when a change occurs in any of the unique IDs and the first version numbers included in the update information table,

the digital broadcast receiving method comprising:

extracting the output information tables from the transport stream according to corresponding packet and section filters;

storing the output information tables extracted by the extracting of the output information tables;

extracting the update information table from the transport stream when the second version number has been updated; and

controlling (i) the extracting of the output information tables to extract an updated version of an output information table and (ii) the storing of the output information tables to update the stored output information tables according to the extracted updated version of the output information table,

wherein, the controlling further comprises:

generating an information list containing information that is included in each stored output information table and corresponds to information included in the extracted update information table;

comparing, with respect to each stored output information table, a corresponding first version number included in the information list with a corresponding first version number of the respective output information table included in the extracted update information table;

identifying, based on the comparing, a stored output information table having a corresponding first version number that has been updated in the extracted update information table; and

respectively setting the packet identifier and the table identifier, included in the unique ID of the output information table identified by the identifying of the stored output information table, as the corresponding packet and section filters according to which the extracting of the output information tables extracts the output information tables to allow the extracting of the output information tables to extract, from the transport stream, an updated version of the output information table identified by the identifying of the stored output information table.

Claim 16 (New) A computer-readable storage medium having a digital broadcast receiving program stored thereon, the digital broadcast receiving program for receiving a transport stream into which a plurality of output information tables and an update information table are respectively and repeatedly multiplexed and into which video data and/or audio data are multiplexed and outputting video data and/or audio data,

wherein each output information table is contained in a transport stream packet in a section format and includes (i) a first version number, (ii) a unique ID including a packet identifier and a table identifier, and (iii) information for extracting and outputting the video data and/or the audio data,

wherein the update information table includes (i) a plurality of unique IDs, each of which identifies a respective output information table, (ii) a plurality of first version numbers, each of which indicates an update version of a respective output information table, and (iii) a second version number indicating a version of the update information table, and

wherein the second version number of the update information table of the transport stream is updated when a change occurs in any of the unique IDs and the first version numbers included in the update information table,

the digital broadcast receiving program causing a computer to execute a method

comprising:

extracting the output information tables from the transport stream according to corresponding packet and section filters;

storing the output information tables extracted by the extracting of the output information tables;

extracting the update information table from the transport stream when the second version number has been updated; and

controlling (i) the extracting of the output information tables to extract an updated version of an output information table and (ii) the storing of the output information tables to update the stored output information tables according to the extracted updated version of the output information table,

wherein, the controlling further comprises:

generating an information list containing information that is included in each stored output information table and corresponds to information included in the extracted update information table;

comparing, with respect to each stored output information table, a corresponding first version number included in the information list with a corresponding first version number of the respective output information table included in the extracted update information table;

identifying, based on the comparing, a stored output information table having a corresponding first version number that has been updated in the extracted update information table; and

respectively setting the packet identifier and the table identifier, included in the unique ID of the output information table identified by the identifying of the stored output information table, as the corresponding packet and section filters according to which the extracting of the output information tables extracts the output information tables to allow the extracting of the output information tables to extract, from the transport stream, an updated version of the output information table identified by the identifying of the stored output

information table.